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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/178,329	10/23/98	NOWAK	M 053649-0003

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IM22/0102

EXAMINER

JACKSON, M

ART UNIT	PAPER NUMBER
1773	9

DATE MAILED: 01/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/178,329

Applicant(s)

NOWAK ET AL.

Examiner

Monique R Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/20/00.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 5, 6, 8-12, 15, 16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 6, 8-12, 15, 16 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 5 and 12 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

1. The amendment filed 10/20/00 has been entered. Claims 2-4, 7, 13-14, and 17 have been canceled and new claims 18-21 have been added. Claims 1, 5-6, 8-12, 15-16, and 18-21 are pending in the application.

Claim Objections

2. The objections of Claims 5 and 6 as recited in paragraph 2 of the prior office action are withdrawn due to the amendment submitted 10/20/00.

3. Claims 5 and 12 are objected to because of the following informalities: "metalized" is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 5-6, 8-12 and 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "substantially no air pockets" which renders the claim indefinite for the term "substantially" is a relative term. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claim 1 further recites "the fold characteristics of paper" on line 10. There is insufficient antecedent basis for this limitation in the claim. It is also noted that the specification provides no definition for "the fold characteristics of paper." It is unclear what this term is referring to – is it the ability to fold, is it the fact that with an increase in

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thickness the material gets harder to fold, is it the ability to unfold or the ability to maintain a crease, etc.?

6. Claims 15 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "high burst strength" in claim 15 is a relative term which renders the claim indefinite. The term "high burst strength" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

7. Claims 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 20 and 21 recite the limitation "The ream of paper according to Claim 18" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 21 further recites the limitation "~~the~~ fold characteristics of paper" on line 10. There is insufficient antecedent basis for this limitation in the claim. It is also noted that the specification provides no definition for "the fold characteristics of paper." It is unclear what this term is referring to – is it the ability to fold, is it the fact that with an increase in thickness the material gets harder to fold, is it the ability to unfold or the ability to maintain a crease, etc.?

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

9. Claims 1, 5-6, 8-9, 11, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Wenzel et al (USPN 5,837,383.) Wenzel et al disclose coated paper stocks useful as packages and having water, grease and moisture vapor resistance (Col. 1, lines 11-13.) The coated paper stock comprises a substrate (12) (*equivalent to the first layer composed of paper of the claimed invention*), an intermediate layer (14) (*equivalent to the adhesive layer of the claimed invention*) and a top layer (16) over the intermediate layer (*equivalent to the second layer composed of a solid polymer film material*) (Fig. 1; Col. 4, lines 42-46.) The intermediate layer is formed from a primer coat which is a water-based dispersion of a polymer selected from the group comprising acrylic polymers, acrylic copolymers, polyvinyl acetate, polyvinyl alcohol, ethylene-vinyl acetate, polyethylene vinyl chloride or polyvinylidene chloride (Col. 5, lines 1-3) and may be combined with a pigment or a wax emulsion (Col. 5, lines 27-37.) The top layer is formed from an aqueous dispersion top coat and provides a pin-hole free, solid polymer film serving as a barrier to water, water vapor and grease and may comprise polyethylene (Col. 5, lines 47-48; Col. 6, lines 1-4.) The primer and top coatings are applied to the substrate as aqueous dispersions and are dried on the substrate surface to form a recyclable and compostable paper stock comprising a paper substrate and two solid layers on the substrate surface (Col. 3, lines 48-50.) The substrates employed are cellulose-based materials and include a variety of coated and uncoated paper and paperboard, including bleached or unbleached, hardwood or softwood, virgin or recycled, and clay coated or uncoated forms of paper or paperboard, such as calendered kraft paper (Col. 3, lines 38-42; Col. 6, lines 20-29 and 52-53.) The basis weight of the substrates is in the range of 20 to 300 lbs. per 3,000sq. ft. (Col. 6, lines 20-29.)

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10. Claims 1, 5, 8, 11, 15, 16, and 18-21 are rejected under 35 U.S.C. 102(e) as anticipated by Wittosch et al (USPN 5,989,724.) Wittosch et al teach a recyclable and repulpable ream wrap comprising a paper substrate coated with two layers of polymeric materials which provide a pin-hole free continuous film of the substrate which is resistant to water and water vapor (Abstract; Fig. 1.) The substrates employed are cellulose-based materials and include a variety of coated and uncoated paper and paperboard, including bleached and unbleached, hardwood or softwood, virgin or recycled, and clay coated or uncoated forms of paper or paperboard with a basis weight of 20 to 150 lbs. per 3,000 sq. ft. (Col. 3, lines 30-40.) The polymeric material coating layers are formed from water-based dispersions which are coated on the substrate surface and dried (Col. 3, lines 4-5 and lines 41-42.) The polymeric dispersion comprises a polymer selected from the group comprising acrylic polymers, acrylic copolymers, polyvinyl acetate, polyvinyl alcohol, ethylene-vinyl acetate, polyvinyl chloride, styrene-butadiene copolymers, polyvinylidene chloride and its copolymers (Col. 3, lines 4-10.) The polymeric dispersion is wax free but may further comprise pigments, mineral fillers, or other additional components such as thickening agents, release agents or antiblocking agents (Col. 3, lines 4-5 and 23-29.) The coated paper stock may be formed into a package, preferably ream wrap, having water resistance, moisture vapor barrier characteristics and grease resistance which prevent the enclosed materials, such as copy paper, from warping or curling (Col. 3, lines 55-62.)

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 10, 12, 15-16 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wenzel et al as applied above to Claims 1, 5-6, 8-9, 11, and 18 and in further view of Wittosch et al (USPN 5,989,724.) The teachings of Wenzel et al are discussed above but do not include the use of the composite paper stock to wrap a ream of paper nor that the paper composite comprises a hot-melt adhesive or a metallized layer. However, it is well known in the art that coated paper stocks or paper composite packaging materials that provide moisture barrier properties are useful as ream wrap materials as evidenced by Wittosch et al. Further, metallization is a well known process in the art to provide improved barrier properties to a composite packaging material and would have been obvious to one having ordinary skill in the art. Lastly, it is noted that the composite taught by Wenzel et al includes a polymeric intermediate layer comprising ethylene-vinyl acetate or polyvinyl chloride (*equivalent to the adhesive layer of the claimed invention.*) This polymeric intermediate layer is applied to the substrate as an aqueous dispersion and upon drying, forms a solid polymer layer of ethylene-vinyl acetate or polyvinyl chloride, etc., which upon heating would melt similar to a polymer layer applied as a hot melt adhesive of polyvinyl acetate or polyvinyl chloride. Hence, the composite material produced is the same product as the instantly claimed composite material. Further, it is well known in the art that composite packaging materials may be formed by lamination or coating as evidenced by Wenzel et al (Col. 1, lines 24-26) or other process methods which do not materially affect the final product composition. Therefore, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a metallized layer to improve the barrier properties, as is well

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known and conventional in the art, in the production of the composite paper packaging material with moisture barrier properties taught by Wenzel et al by coating or by lamination or other well known process for forming composite materials and to utilize this packaging material to wrap reams of paper as is well known in the art and taught by Wittosch et al.

13. Claims 6, 9, 10, and 12 are rejected under 35 U.S.C. 103 (a) as unpatentable over Wittosch et al as applied above to Claims 1, 5, 8, 11, 15, 16, and 18-21. The teachings of Wittosch et al are discussed above. Wittosch et al does not teach the use of polyethylene, wax, or hot melt adhesives to produce the composite wrap material disclosed. In fact, Wittosch et al discloses that it is well known in the art to utilize polyethylene and wax to produce conventional ream wraps with effective water vapor barrier properties, however Wittosch et al teach away from their use because wrap materials comprising polyethylene or a high loading of wax are more difficult to recycle (Col. 1, lines 40-60.) However, if ease of recycling is not a concern, it would have been obvious to one having ordinary skill in the art to utilize polyethylene or wax materials in the production of the composite wrap material taught by Wittosch et al. Further, it is well known in the art that metallization of composite packaging materials provides improved barrier properties and would have been obvious to one having ordinary skill in the art. Lastly, it is noted that the composite taught by Wittosch et al includes a base coat or layer comprising ethylene-vinyl acetate or polyvinyl chloride (*equivalent to the adhesive layer of the claimed invention.*) This polymeric base layer is applied to the substrate as an aqueous dispersion and upon drying, forms a solid polymer layer of ethylene-vinyl acetate or polyvinyl chloride, etc., which upon heating would melt similar to a polymer layer applied as a hot melt adhesive of polyvinyl acetate or polyvinyl chloride. Hence, the composite material produced is the same

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product as the instantly claimed composite material. Further, it is well known in the art that composite packaging materials may be formed by lamination or coating as evidenced by Wittosch et al (Col. 1, lines 27-28) or other process methods which do not materially affect the final product composition. Therefore, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a metallized layer to improve the barrier properties, as is well known and conventional in the art, in the production of the ream wrap material as taught by Wittosch et al by coating or by lamination or other well known process for forming composite materials and to utilize polyethylene or wax as conventional barrier materials for ream wraps if ease of recycling is not a concern.

Response to Amendment

14. In view of the amendment filed 10/20/00, the following rejections have been withdrawn:
- a. Rejections of Claims 1, 2, 6 and 8 under 35 U.S.C. 102(b) and Claims 15-17 under 35 U.S.C. 103 (a) as anticipated by or unpatentable over Akao et al as recited in paragraphs 3 and 10 of the prior office action. Akao et al do not teach the basis weight of the paper substrate.
 - b. Rejection of Claims 1, 2, 6 and 8 under 35 U.S.C. 102(b) as anticipated by and Claims 15-17 under U.S.C. 103(a) as unpatentable over Gibbons et al as recited in paragraphs 4 and 11 of the prior office action. Gibbons et al do not teach the basis weight of the paper substrate.
 - c. Rejection of Claims 1, 2, 6 and 8 under 35 U.S.C. 102(b) as anticipated by and Claims 15-17 under U.S.C. 103(a) as unpatentable over Kato et al as recited in

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paragraphs 5 and 12 of the prior office action. Kato et al do not teach the basis weight of the paper substrate.

d. Rejection of Claims 1, 2, 6 and 8 under 35 U.S.C. 102(e) as anticipated by and Claims 15-17 under U.S.C. 103(a) as unpatentable over Parks as recited in paragraph 7 and 14 of the prior office action. Parks does not teach the basis weight of the paper substrate.

e. Rejection of Claims 1, 3-5, and 7-12 under 35 U.S.C. 103(a) as unpatentable over Bunker et al as recited in paragraphs 8 and 9 of the prior office action. Bunker et al specifically disclose the formation of air pockets between the composite layers.

Response to Arguments

15. Applicant's arguments with respect to the rejection over Wenzel et al have been considered but are not persuasive. The Applicant argues that the structure disclosed by Wenzel et al calls for the application of liquid coatings to a paper substrate which are thereafter dried to remove the water. The Applicant further argues that the instantly claimed film material is formed by a solid film material at the time it is applied which results in the reduction in the expense of preparation of the composite material. The Applicant also notes that the apparatus used to apply the solid film is vastly different than the apparatus used to apply the water-based coating of Wenzel. However, it is the Examiner's position that the product formed by coating as Wenzel et al or by lamination as instantly claimed would be the same product given that the individual layers are composed of the same materials. Considering the claims are directed to an article or product, determination of patentability is based on the product itself not its method of production given that the method of production does not change the structure or composition of

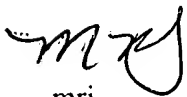
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the product. Hence, the rejections under 35 U.S.C. 102(e) as anticipated by and under 35 U.S.C. 103(a) as unpatentable over Wenzel et al have been maintained.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5436 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



mrj
December 28, 2000


D. S. NAKARANI
PRIMARY EXAMINER, Acting SPE